

## AMENDMENTS TO THE CLAIMS

Set forth below is a listing of the claims of the instant Application. Claims 1-9 are canceled and replaced with new Claims 10-21. Please enter of record for the instant Application the claims as listed herein.

Claims 1-9 (canceled).

3  
Claim 10 (new): A method for measuring growth parameters of a multi-layer material while the layers are being built up comprising the steps of illuminating a layer during epitaxy under constant processing conditions with a constant illuminating energy and measuring the reflectivity of the layer over time to determine a position and a value of an extremum of Fabry-Perot oscillations of the layer and then comparing the position and the value of the extremum to a standard.

2  
Claim 11 (new): The method of claim 10 wherein the multi-layer material is a semiconductor.

3  
Claim 12 (new): The method of claim 10 wherein the position and the value of a first minimum of the Fabry-Perot oscillations is utilized.

4  
Claim 13 (new): The method of claim 10 wherein the growth parameters are process temperature, growth rate, composition or concentration of incorporated doping materials.

5  
Claim 14 (new): The method of claim 10, wherein the measured reflectivity is related to the reflectivity of a reference material, on which at least one layer of the reference material is built up.

6  
Claim 15 (new): The method of claim 14, wherein the measured reflectivity is normalized.

7  
Claim 16 (new): The method of claim 10, wherein at the end of a process step or of the whole process, a layer of the same material as a substrate material, on which at least one layer is built up, is washed and its characteristics are compared with the characteristics present at the start of the process.

8  
Claim 17 (new): The method of claim 10, wherein the material properties are monitored at the same time, at least before the start and after the end of the process by an RAS measurement.

9  
Claim 18 (new): The method of claim 10, wherein the reflectivity at the position and the value of the extremum of the Fabry-Perot oscillations under consideration is used to determine the process temperature.

10  
Claim 19 (new): The method of claim 10, wherein the process time up to the position and the value of the extremum of the Fabry-Perot oscillations under consideration is used to determine the growth rate of the layers.

11  
Claim 20 (new): The method of claim 10, wherein, when the process temperature is determined previously, a position and a value of an extremum of Fabry-Perot oscillations of a ternary layer under consideration is used to determine the composition of the layer.

12  
Claim 21 (new): The method of claim 10, wherein the illumination energy is selected in a range, in which the temperature dependence of a real part of a dielectric function of participating materials is monotonic.